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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,764	03/19/2004	Mark Johnsgard	PA2704US	7692

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EXAMINER

WU, IVES J

ART UNIT	PAPER NUMBER
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1724

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/804,764	JOHNSGARD ET AL.	
	Examiner	Art Unit	
	Ives Wu	1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 15 and 17-26 is/are rejected.
- 7) ☒ Claim(s) 4-14 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>6/24/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show top end 126 on Figure 1 as described in the specification, page 9 [0020]. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

- (1). **Claims 20-25** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 20, it recites: to near a condensation temperature of effluent gas. It is well known in the art that condensation temperature depends on the pressure. One ordinary skill in the art would not assume the pressure without knowing the operating pressure within the scrubber

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environment. Also the term "near" in claim 20 renders the claim indefinite. The specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claims 21-25 are rejected because they depend on claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(2). **Claims 1,15,17-19** are rejected under 35 U.S.C. 102(b) as being anticipated by Seeley et al (US20010032543A1).

As to a port configured to receive an effluent gas stream from an exhaust line in an inlet manifold in **independent claim 1**, Seeley et al (US20010032543A1) disclose abatement of semiconductor processing gases (Title). Illustrated in Figure 1, a series of inlets 7 for the entry of exhaust gases in to the container 1 ([0025]).

As to a heated gas inlet configured to receive a stream of heated gas in an inlet manifold in an inlet manifold in **independent claim 1**, Seeley et al disclose a series of inlets 8 for the entry air in to the container 1 ([0026]) as shown in Figure 1. In use of apparatus, both the sleeve 11 and the plate 13 are heated to, for example 400 °C. So that air flowing in to the container 1 through inlets 8 is heated by contact therewith and enters the container 1 at an elevated temperature ([0031]).

As a scrubber interface device in fluid communication with inlet manifold and configured to deliver the effluent gas stream from the inlet manifold to a gas scrubbing system in **independent claim 1**, Seeley et al disclose the gas stream and air to be preferably mixed prior to entry in to the container, although this premixing region is not shown as number in the Figure, it would be the scrubber interface device extending from the top of container 1 to the heater 13.

As to scrubber inlet device in **independent claim 1**, the disclosure of Seeley et al meet the requirements of present claim in terms of components and their arrangement, it would be used as a scrubber inlet device.

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As to limitation of **claim 15**, Seeley et al disclose air from inlet 8 to be heated for example 400 degree C, so that the air flowing in to the container 1 thru inlet 8 is heated by contact therewith ([0031]).

As to limitation of **claim 17**, Seeley et al disclose the clean dry air which naturally includes the Nitrogen.

As to limitation of **claim 18 and 19**, Seeley et al disclose air from inlet 8 to be heated for example 400 degree C, so that the air flowing in to the container 1 thru inlet 8 is heated by contact therewith ([0031]). It would be obvious to have a temperature regulating system in order to keep the temperature at 400 degree C and it is well known in the one of ordinary skilled in the art there needs a temperature sensor with controlling means keep the temperature constant at 400 degree C.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

(3). **Claims 2,3, 20, 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over Seeley et al (US20010032543A1), evidenced by Lane et al (US005846275A).

As to port including an insulating insert sleeve in **claim 2**, Seeley et al do not teach the insulating sleeve for the effluent gas inlet port. However, it would be obvious to have insulating materials for the effluent inlet port because the thermal stress between the hot air port and effluent gas port exists if the temperature difference is high.

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Therefore, it would be obvious to one of ordinary skills in the art to insulate the effluent gas inlet port in the abatement device of Seeley et al.

As to inlet manifold further including insulation around an exterior in **claim 3**, Seeley et al do not teach the insulation around the exterior of inlet manifold. However, it would be obvious to have insulating materials for the exterior of inlet manifold because of preventing condensation of the effluent gas as evidenced by Lane et al (US005846274), to resist clogging (Col. 1, line 41-50). Therefore, it would be obvious to one of ordinary skills in the art to insulate the exterior of inlet manifold of Seeley et al.

As to limitation of **independent claim 26**, the disclosure of Seeley et al is incorporated herein by reference, the most subject matters of port of effluent gas stream at a first temperature, means for maintaining the effluent gas stream at or near the first temperature, scrubber interface device, scrubber inlet device as currently claimed, have been recited in applicants' claims 1 and 2, and have been discussed therein.

As to step of receiving the effluent gas stream into a manifold in a method for delivering an effluent gas stream into a gas scrubbing system in **independent claim 20**, Seeley et al disclose a method for abatement of one or more pyrophoric gases in a gas stream (Abstract, line 1-2). A series of inlets 7 for the entry of exhaust gases in to the container 1 as shown in Figure ([0025]).

As to step of heating interior surface of the manifold to near a condensation temperature of the effluent gas in a method for delivering an effluent gas stream into a gas scrubbing system in **independent claim 20**, Seeley et al disclose, in use of the apparatus, both the sleeve 11 and the plate 13 are heated (the former by the heater 5 and the latter by means not shown) to, for example 400 °C ([0031], line 1-3). In the absence of showing the criticality of records, the optimized temperature of near condensation in known process renders *prima facie obviousness* within one of ordinary skills in the art. *In re Boesch*, 617 F.2d 272,276,205 USPQ 215,219 (CCPA 1980).

As to the step of providing the effluent gas stream to an interface device that is effective to suppress nucleation of condensation from the effluent gas stream and configured to direct the effluent gas stream into the gas scrubbing system in independent claim 20, because of the high temperature in the comparative examples, it would have been obvious that the apparatus provide

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effective suppression of nucleation of condensation from effluent gas stream and configuration of directing effluent gas stream into gas scrubbing system.

Allowable Subject Matter

(3). **Claims 4-14, 16** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu

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Date: February 9, 2007

DUANE SMITH
PRIMARY EXAMINER

D. Smith
2-9-07